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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,926	01/26/2004	Peter Maier-Laxhuber	119-29	9640

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EXAMINER

ZEC, FILIP

ART UNIT PAPER NUMBER

3744

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/764,926	MAIER-LAXHUBER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Filip Zec	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-13, 16 and 17 is/are rejected.
- 7) ☒ Claim(s) 9, 14 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/2/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5-8, 10-13 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,518,069 to Maier-Laxhuber et al. In FIG. 1, Maier-Laxhuber teaches a sorption cooling apparatus and method for cooling a thermally insulated cooling container comprising a sorber container (2) containing a sorbent material (1) for sorbing a working fluid during a sorption phase; an evaporator (7) disposed inside the cooling container (10), said working fluid evaporating to a working fluid gas in said evaporator during a desorption phase; a valve (8) connected between said sorber container and said evaporator, said valve being adapted to be shut off for stopping a flow of said working fluid gas (6); an evaporator blower (11) disposed adjacent said evaporator for passing an air stream over said evaporator; and a sorber blower (5) disposed adjacent said sorber container for circulating air around said sorber container containing said sorbent material, said apparatus further comprising an electrical heating system dedicated to said sorber container (3), an electrical accumulator for supplying electricity to said sorber blower and said evaporator blower (col 4, lines 1-5), wherein said sorbent material comprises zeolite and said working fluid comprises water (col 7, lines 39-40) and a temperature sensor coupled to said

evaporator for turning off said electrical heating system of said sorber container once a preselected threshold temperature has been exceeded (col 3, lines 7-16).

*Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent 5,518,069 to Maier-Laxhuber et al., in view of U.S. Patent 5,664,427 to Rockenfeller et al.

Maier-Laxhuber discloses applicant's basic inventive concept, a sorption cooling apparatus and method for cooling a thermally insulated cooling container, substantially as claimed with the exception of stating that at least one of said sorber container and said evaporator includes surfaces, shaped like plates and are adapted for exchanging heat with a stream of air and that the method comprises opening the door of the cooling container during the desorption phase.

Rockenfeller shows sorber container and evaporator, which include surfaces shaped like plates and are adapted for exchanging heat with a stream of air (col 5, lines 38-40) and a sorption method for cooling comprising opening the door of the cooling container during the desorption phase (col 16, lines 14-16) to be old in the refrigeration art. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made from the teaching of Rockenfeller to modify the system of Maier-Laxhuber, by specifying the shape of heat exchanging surfaces to be a plate in order to maximize the heat exchanging surface in a

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small and flat environment, based on common heat transfer calculations understood by those skilled in the art (col 5, lines 35-60) and by opening the door of the cooling container during the desorption phase in order to enable the convective ambient air cooling of the sorber reactor.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,518,069 to Maier-Laxhuber et al., in view of U.S. Patent 5,992,168 to Pfister et al. Maier-Laxhuber discloses applicant's basic inventive concept, a sorption cooling apparatus and method for cooling a thermally insulated cooling container, substantially as claimed with the exception of stating that the valve used is a control valve for controlling a temperature of an evaporator by means of throttling a stream of working fluid gas. Pfister shows a control valve (48, FIG. 1) for controlling a temperature of an evaporator (42, FIG. 1) by means of throttling a stream of working fluid gas (col 5, lines 57-60) to be old in the refrigeration art. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made from the teaching of Pfister to modify the system of Maier-Laxhuber, by specifying that the valve used is a control valve for controlling a temperature of an evaporator by means of throttling a stream of working fluid gas in order to expand the working fluid prior to entering the evaporator and produce a cooling effect (col 6, lines 43-45).

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,518,069 to Maier-Laxhuber et al. Maier-Laxhuber discloses applicant's basic inventive concept, a sorption cooling apparatus and method for cooling a thermally insulated cooling container, substantially as claimed with the exception of stating that a sorber container is adapted to ensure that a maximum heat conduction path to a surface of the cooling container is less than 2 cm. The applicant should note that the change in size of the heat conduction path for the

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intended use is a design consideration within the skill of the art, In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Maier-Laxhuber, by specifying that the maximum heat conduction path to a surface of the cooling container is less than 2 cm in order to minimize the heat loss.

### *Double Patenting*

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1-8 and 10-13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,412,295 to Weiss et al. Although the conflicting claims are not identical, they are not patentably distinct from each other because the same invention is claimed in both, namely a sorption device for heating and cooling gas streams, with a sorbent container which contains a sorbent that takes up a working fluid which evaporates in an evaporator that contains a quantity of working fluid in correspondence with the quantity of sorbent, with a sorbent heat exchanger which exchanges the heat between a sorbent and a sorbent gas stream, with a working fluid heat exchanger which

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exchanges the heat between the working fluid and a working fluid gas stream, and with a closable valve between the sorbent container and the evaporator, which valve is able to interrupt the flow of the working fluid vapor, wherein both the sorbent heat exchanger and the working fluid heat exchanger, at the inlets and outlets, have connecting elements or switching elements which can be readily attached to, detached from, and exchanged for one another on the gas flow channels for supplying and discharging the gas streams that are to be heated or cooled, using blower to force and control the airflow.

*Allowable Subject Matter*

9. Claims 9, 14 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 6,349,553 to Pfister, Dennis et al. teaches a method and system for cooling electrical components.

U.S. Patent 5,666,819 to Rockenfeller et al. teaches a rapid sorption cooling or freezing appliance.

U.S. Patent 6,305,186 to Py, Xavier et al. teaches a process of management of a thermochemical reaction or of a solid-gas adsorption.

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U.S. Patent 5,477,706 to Kirol, Lance D. et al. teaches a heat transfer apparatus and methods for solid-vapor sorption systems.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Filip Zec whose telephone number is (571) 272-4815. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Filip Zec  
Examiner  
Art Unit 3744

  
**CHERYL TYLER**  
SUPERVISORY PATENT EXAMINER

FZ